

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Revised Draft Staff Report **Proposed Amended Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers**

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PREFACE

This Revised Draft Staff Report represents SCAQMD staff's current proposal for Proposed Amended Rule 1148.2. Staff is continuing to work with Stakeholders to discuss key elements of the proposal. Minor changes may occur between the Revised Draft Staff Report and the Final.

EXECUTIVE SUMMARY

The South Coast Air Quality Management District (SCAQMD) staff is proposing to modify the chemical reporting requirements in Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers so they will be more consistent with state law. The California Department of Conservation, through its Division of Oil, Gas, and Geothermal Resources (DOGGR), has adopted well stimulation treatment regulations¹ in response to the passage of Senate Bill (SB) 4 (2012-2013 Reg. Sess.) (approved by the Governor on September 20, 2013). The regulations were finalized in December 2014 and become effective on July 1, 2015. However, DOGGR has implemented similar interim regulations that are in currently in effect. Proposed Amended Rule (PAR) 1148.2 will: 1) disaggregate the reporting of the trade name product from the chemical ingredients within the product; 2) no longer require the reporting of chemical mass maximum concentration within the trade name product, and instead require the ~~maximum concentration in percent by mass of each chemical ingredient within the total well drilling, well rework, and well completion fluid~~ to be reported; and, 3) make all of the well stimulation information deemed not to be trade secret under SB 4 available to the public on the SCAQMD's website. In addition, PAR 1148.2 will revise the notification timeframe and require operators to notify the Executive Officer a minimum of, 72 hours instead of 24 hours, before starting a Rule 1148.2 activity. In addition, PAR 1148.2 will allow operators to extend the start time of the well activity in 24-hour increments. PAR 1148.2 limits the number of 24-hour extensions to five. Additional minor changes to rule language have been made for consistency and clarity. The proposed amended rule will continue to require the reporting of specific information not required under SB 4 and DOGGR's reporting structure.

INTRODUCTION

Rule 1148.2 was adopted on April 5, 2013 to establish requirements for owners or operators of oil and gas wells to notify the Executive Officer when operations involving well drilling, well reworks and well completions such as hydraulic fracturing, acidizing, and gravel packing. Rule 1148.2 also requires suppliers of chemicals that are used in the aforementioned well activities to provide information on chemical use. Following the adoption of Rule 1148.2, SB 4 was signed into law and DOGGR developed SB4 Well Simulation Treatment Regulations that include chemical reporting requirements for some well stimulation techniques that are also covered by Rule 1148.2. The Proposed Amended Rule 1148.2 outlined below is to introduce revisions to the chemical reporting requirements in order to be more consistent with SB 4 and DOGGR's regulations implementing SB 4.

BACKGROUND

Rule 1148.2 was adopted on April 5, 2013 and established requirements for owners or operators of oil and gas wells to notify the Executive Officer when conducting well drilling, well reworking, or well completion activities. In addition to production drilling, the rule is applicable to hydraulic fracturing, maintenance and matrix acidizing, acid fracturing and gravel packing activities. The rule also includes requirements for well operators and chemical suppliers to report information on the chemical composition of trade name products used during the well

¹ The Department of Conservation added sections, 1761, 1780, 1781, 1782, 1783, 1783.1, 1783.2, 1783.3, 1784, 1784.1, 1785, 1786, 1787, 1788, and 1789 to Title 14, Division 2, Chapter 4, Subchapter 2 of The California Code of Regulations.

event activity. Under the current rule, chemical suppliers have to provide well operators with the identities of the trade name products, the amount of each trade name product and purpose for each chemical ingredient used in well drilling, well completion, and well stimulation fluids; as well as chemical identities, Chemical Abstract Service (CAS) numbers, and maximum concentration ~~for~~ in percent by mass of each chemical ingredient used in the ~~total fluid~~ trade name product. The current rule allows chemical suppliers to claim trade secret protection for chemical ingredients within the trade name product. For any trade secret claim, suppliers must provide operators with substitute information -- the chemical family name for each chemical ingredient for which a trade secret claim is asserted. Independent of trade secret claims, suppliers shall also inform operators whether each chemical ingredient is an air toxic.

On September 20, 2013, Governor Brown signed SB 4 – a bill establishing a structure for regulating advanced well stimulation treatments – which are treatments of a well designed to enhance oil and gas production or recovery by increasing the permeability of the formation such as hydraulic fracturing and certain forms of acidizing. Among other things, SB 4 requires an operator to apply for a permit prior to performing a well stimulation treatment and to publically post specified information regarding the well stimulation fluid. As required by SB 4, DOGGR developed interim regulations that went into effect in California on January 1, 2014. The final DOGGR regulations were approved in December 2014, and will go into effect on July 1, 2015.

Under DOGGR’s SB 4 regulations, operators and suppliers shall report identities and concentrations of chemicals used in well stimulation treatments. Under DOGGR’s regulation, well stimulation treatments include hydraulic fracturing, acid fracturing, and acid matrix stimulation treatment². While setting forth chemical reporting requirements, SB 4 also sets limits on information that can be claimed trade secret with respect to well stimulation treatment fluids. The law states that none of the following are protected as trade secret: (1) identities and CAS numbers of chemical ingredients of additives used in well stimulation treatments (2) concentrations of additives within well stimulation treatment fluids (3) any air or other pollution monitoring data (4) health and safety data associated with well stimulation treatment fluids and (5) the chemical composition of the flowback fluid. Table 1 compares the reporting requirements in SCAQMD Rule 1148.2 and DOGGR’s SB 4 regulations.

As shown in Table 1 and discussed below, the differences between the two reporting structures are:

Well Activities Covered by Reporting Requirements

SCAQMD Rule 1148.2 covers drilling, gravel packing, hydraulic fracturing, acid fracturing, and maintenance and matrix acidizing, while SB 4 regulations focus on hydraulic fracturing, acid fracturing and matrix acidizing.

Trade Secret Protection

As adopted, SCAQMD Rule 1148.2 allows suppliers to claim trade secret protection for chemical identities and CAS numbers of chemicals contained in well stimulation treatment

² Under DOGGR’s SB 4 regulation, acidizing must exceed a specified “acid volume threshold” to be applicable under the regulation. This is a metric that characterizes the total volume of acid used for a given well bore dimension.

additives, while SB 4 disallows these claims for the well stimulation activities covered under SB 4.

Table 1
Comparison between SCAQMD Rule 1148.2 and DOGGR's SB 4 Regulations Reporting Requirements.

Topic	Rule 1148.2	SB4/DOGGR
Well Events Where Chemical Reporting is Required	<ul style="list-style-type: none"> • Hydraulic Fracturing • Acid Fracturing • Acid Matrix Stimulation Treatment • Maintenance Acidizing • Gravel Packing • Drilling 	<ul style="list-style-type: none"> • Same • Same • Similar³(above acid volume threshold) • No requirement • No requirement • No requirement
Well Stimulation Fluid Reporting	<ul style="list-style-type: none"> • List of chemicals • Reported after well event activity 	<ul style="list-style-type: none"> • Same • Reported prior to and after well event activity
Reporting Chemical Ingredient within Trade Name Product	<ul style="list-style-type: none"> • Report the Trade Name Product • Report the chemical ingredients within a Trade Name Product 	<ul style="list-style-type: none"> • Report the Trade Name Product • Report the chemical ingredients with no correlation to Trade Name Product
Reporting Requirements for Well Stimulation Chemical Ingredients ⁴	<ul style="list-style-type: none"> • Chemical ingredient names • CAS# • Maximum mass concentrations of chemical ingredient <u>within trade name product</u> • Mass or volume and density of trade name product • Identify if chemical is an air toxic • Purpose of chemical ingredient 	<ul style="list-style-type: none"> • Same • Same • Maximum mass concentration of chemical ingredient <u>within total well stimulation fluid</u> • Mass concentration of trade name product within total fluid • No requirement • Purpose of Trade Name Product
Is Trade Secret allowed?	<ul style="list-style-type: none"> • Yes, except for chemical family name and whether chemical is an air toxic 	<ul style="list-style-type: none"> • Yes, except for chemical identities, including CAS#, mass concentration of additives within fluid, any air or other pollution monitoring data, health and safety data, and flowback fluid composition

³ Under DOGGR's SB 4 regulations, any type of acidizing must exceed the "acid volume threshold" to be applicable under the regulation. This is a metric that characterizes the total volume of acid used for a given well bore dimension

⁴ Only a partial list of what is required to be reported under SB 4 and DOGGR's regulation is shown.

Rather than stating what can be protected as trade secret, SB 4 states what information cannot be protected as trade secret. Thus, state law does not explicitly prohibit an operator or chemical supplier from claiming trade secret protection for the chemical ingredient mass concentration within the trade name additive. However, Rule 1148.2 does require that the total mass of the trade name product and maximum percent concentration by mass of each chemical ingredient within each trade name product be reported.

Therefore, in order to align Rule 1148.2 with state law, SCAQMD staff is proposing changes to chemical reporting requirements in Rule 1148.2. The SCAQMD staff is proposing that Rule 1148.2 reporting requirements be restructured in order to disallow trade secret claims for the information specified in SB 4 as not protectable for those well stimulation treatments defined under the DOGGR's SB 4 Well Stimulation Treatment Regulations (Title 14, Division 2, Chapter 4, Subchapter 2, Article 2, section 1761).

PROPOSED AMENDMENTS TO RULE 1148.2

Proposed Amended Rule 1148.2 proposes to revise the reporting requirements for drilling, well rework, and well completion chemicals and trade name products in order to make the rule more consistent with SB 4 and DOGGR's reporting structure, while still requiring the reporting of additional chemical information not covered by SB 4. PAR 1148.2 will: 1) disaggregate the reporting of the trade name product from the chemical ingredients within the product; 2) no longer require the reporting of the chemical mass concentration within the trade name product, and instead require the ~~maximum concentration of the chemical ingredient in percent by mass of each chemical ingredient within the total well drilling, well rework, or well completion fluid to be reported~~; and 3) make all the SB 4 related well stimulation information deemed not to be trade secret under SB 4 provisions, available to the public on the SCAQMD's website. PAR 1148.2 also includes revisions to the notification requirements. Additional minor changes to rule language also will be made for consistency and clarity, ~~as well as retaining one provision from the current rule that sunset in April 2015, which requires the total volume of well treatment fluids to be reported.~~

Disaggregate the reporting of the trade name product from the chemical ingredients within the product

Under the current version of Rule 1148.2, a supplier providing trade name product and chemicals to an operator shall provide information on each trade name product. The information provided shall contain the identity of the trade name product and its total mass. Additionally, under paragraph (e)(2)(B)-(D) of the current version of Rule 1148.2, for all trade name products⁵ a supplier shall also provide the chemical ingredients' identity, chemical abstract service number, the maximum concentration by mass of each chemical within the trade name product, the purpose of the chemical ingredient, and whether the chemical ingredient is an air toxic. Under the current Rule 1148.2 reporting structure, each trade name product and its chemical ingredients are linked together.

⁵ SB 4 and DOGGR's interim and final regulation use the term "Well Stimulation Treatment Additive" while Rule 1148.2 uses the term "Trade Name Product". For purposes of Rule 1148.2, they are synonymous. For consistency purposes, PAR 1148.2 and this staff report uses "Trade Name Product".

SB 4 Regulations (Title 14, Division 2, Chapter 4, Subchapter 2, Article 4, section 1788) require the disclosure of the trade name and purpose for all trade name products used in well stimulation as well as the chemical identities, CAS numbers and maximum concentrations of each chemical within the well stimulation fluids. Under the DOGGR's SB 4 regulations reporting structure, trade names of additives and their chemical ingredients are reported and publically listed separately. This structure prevents matching chemical ingredients of trade name products with the actual trade name of the additive, therefore limiting the ability to determine their exact formulation. Based on SCAQMD's discussions with industry representatives, disaggregation of the chemical ingredients from the trade name products or additives, potentially reduces the need for suppliers to claim trade secret protection for their products for both SB 4 related activities and those activities not applicable under SB 4, such as maintenance acidizing and gravel packing. Further discussion with DOGGR's staff indicated that to date DOGGR has not received any trade secret claims for the chemical information submitted under the SB 4 interim regulations.

The current version of Rule 1148.2 (e)(3), allows the suppliers of chemicals to claim trade secret protection for exact chemical identities, CAS numbers and concentrations of chemicals within each trade name product. The SCAQMD staff believes that some portion of trade secret claims is invoked due to the fact that Rule 1148.2 links trade name products to their chemical ingredients. Therefore, suppliers elect to claim trade secret protection in order to protect the exact formulation of their additives. By disaggregating trade names from chemical ingredients, the SB 4 reporting scheme provides for the complete disclosure of the identity of chemical ingredients while protecting the exact formulation of each trade name product and therefore eliminating trade secret claims for SB 4 related activities and greatly reducing trade secret claims for non-SB 4 related activities.

Therefore, in order to maintain the highest level of public disclosure, SCAQMD staff is modifying the structure of chemical reporting for Rule 1148.2 in a way that disaggregates the products' trade names and their chemical ingredients. Specifically, the PAR 1148.2 Reporting Portal forms will be modified to introduce separate sections for the reporting of trade name products and chemical ingredients. Under this modified reporting structure, for each well activity type, all trade name products, their purpose and their supplier names will be reported in a separate section from the chemical ingredient information, which includes: the chemical name, CAS number, the ~~maximum concentration in percent by mass of each chemical ingredient within the total well drilling, well rework, and well completion fluid~~ to be reported, and air toxic identifier.

~~**Replace requirement for the reporting of chemical concentration within the trade name product with requirement for reporting the maximum concentration of the chemical in percent by mass within the total well drilling, well rework, and well completion fluid**~~ **Require the reporting of chemical mass instead of concentration within the trade name product**

The chemical reporting requirements in the current version of Rule 1148.2 (e)(2)(D) require the supplier to provide to the operator the maximum concentration of each chemical ingredient (in percent, by mass) for each chemical ingredient within the trade name product. DOGGR's SB 4 Regulations (Title 14, Division 2, Chapter 4, Subchapter 2, Article 4, section 1783.1) require the

disclosure of the maximum chemical concentration (in percent, by mass) within the total well stimulation fluids for each chemical constituent.

Proposed Amended Rule 1148.2 proposes to disaggregate reporting of trade name products and their chemical ingredients, deeming the reporting of the concentration of a chemical ingredient within a trade name product unnecessary. Therefore, SCAQMD staff is proposing to replace the requirement for the reporting of maximum concentration in percent by mass of the chemical ingredient within the trade name product with the requirement to report the ~~maximum concentration in percent by mass~~ of each chemical ingredient supplied to the operator within the total well drilling, well rework, and well completion fluid. Where the actual total mass of each chemical ingredient is not available, the supplier may report the total mass using the maximum concentration in percent by mass to calculate the total mass of the chemical ingredient.

Additionally, based on a review of all the chemical data submitted since the adoption of the rule, SCAQMD staff has determined that in 99% of cases, operators and suppliers submit the mass of trade name product rather than providing the volume and density⁶. Therefore, requiring an operator to report the mass rather than providing the option of reporting the mass or the volume and density will streamline the reporting process. In addition, environmental and community group representatives recommended that reporting the mass is more informative than the volume and density. The preceding changes in reporting requirements will still maintain the disclosure of the amounts of chemicals and additives used in well activities without eliminating any vital information.

Make chemical identity information that SB 4 deems cannot be protected as trade secret available to the public on the SCAQMD's website

The current version of R1148.2 (e)(3) allows a chemical supplier to assert a trade secret protection claim for chemicals used in any of well activities covered by the rule. The following information can be claimed as trade secret on the Chemical Report Forms: chemical identity of some or all ingredients of a trade name product; CAS number of the chemical ingredient; and maximum concentration of a chemical ingredient within a trade name product. SB 4, however, states that identities of chemicals and their CAS numbers used in well stimulation treatments applicable under SB 4, shall not be protected as trade secret.

Proposed ~~a~~A amended Rule 1148.2 will introduce reporting requirements disallowing trade secret claims for chemical identities and CAS numbers of chemicals used in well stimulation activities falling under SB 4's jurisdiction. The part of the R1148.2 reporting portal for the reporting of trade secret chemicals will be redesigned to differentiate between trade secret claims for chemicals and CAS numbers used in well activities that are covered by the SB 4 and those that are not. Suppliers can no longer assert trade secret claims for identity and CAS numbers of chemicals used in well stimulation activities that fall under the SB 4 regulations, therefore making the identities of all chemicals used in well activities that fall under SB 4 available to the public on the SCAQMD website.

⁶ The total mass of the trade name product may be calculated using the product of the volume and density.

Increasing the Minimum Notification Time from 24 hours to 72 hours

During the development of PAR 1148.2, environmental and community representatives requested that minimum well event notification timeframe be increased from 24 to 72 hours, such that operators will be required to provide notifications for Rule 1148.2 well activities at least 72 hours before the well activity begins. Community representatives have commented that families need 72 hours notice to modify their day to leave their residence or make other arrangements. As a result, the SCAQMD staff is proposing to amend Rule 1148.2 to increase the minimum notification timeframe from 24 to 72 hours. PAR 1148.2 clarifies that there is a 24-hour window from the originally projected start date and time to begin the well event without filing a new notification. There is no change to the current requirement that the maximum number of days that a well event notification may be submitted prior to the start date is 10 days, so PAR 1148.2 proposes a the notification period of 72 hours to 10 days before the start date.

During the development of PAR 1148.2, operators had commented that a 72 hour notification period before the start date was a concern if they would be required to wait 72 hours if the event was delayed and they needed to re-notify. Operators commented that there are frequent last minute delays common in the well drilling and treatment operations due to scheduling equipment, delays in receiving equipment, operational delays at the site, to name a few. In addition, requiring operators to wait 72 hours every time an event is delayed may be frustrating to the public if they are trying to schedule and make arrangements based on when the well activity is expected to occur.

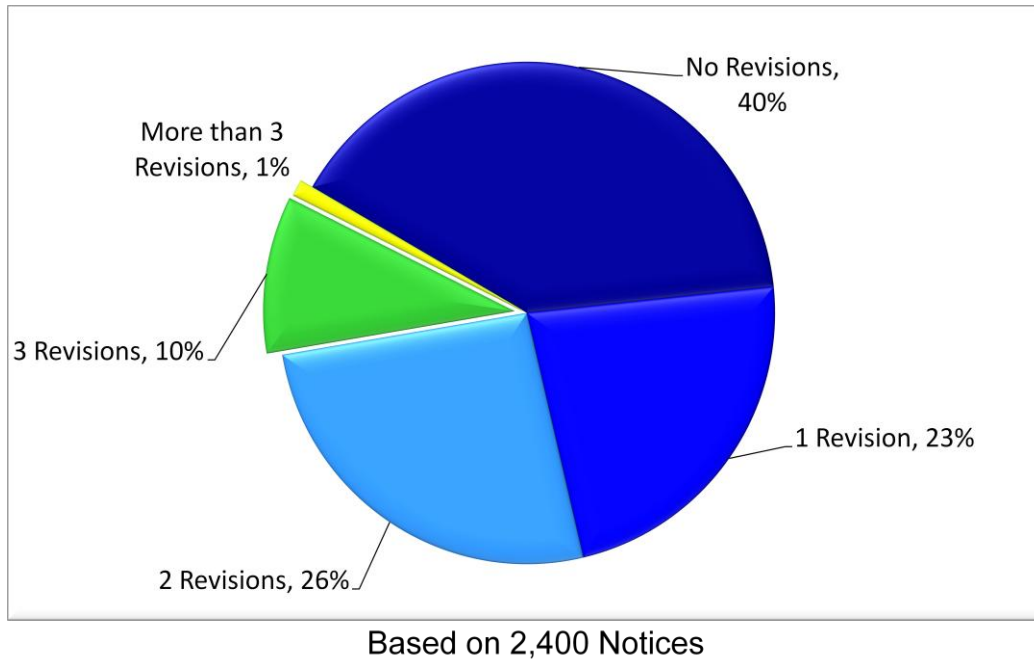
Rule 1148.2 operators have indicated that there are many reasons why a well drilling, rework, or completion may need to be delayed which is beyond the control of the operator. These reasons include the following:

- Well drilling equipment availability driven by maintenance and on-site availability often lead to delays in starting a well drilling event.
- Geological/down-hole variabilities can lead to typical delays in beginning a well drill event due unforeseen conditions that cause adjustments or re-evaluations to well drilling protocols and needed on-site equipment and materials.
- Maintenance work variabilities including pre-drilling activities such as removal of well head equipment, well bore preparation, or need for unplanned acid jobs.
- Issues related to contractor's equipment, supplies, and service logistics not being available at the projected time.
- Utility and facility issues such as power failures
- Unforeseen weather and travel events such as fog, high winds, rain, and roadway closures.

The SCAQMD staff evaluated the existing Rule 1148.2 database to determine the frequency that original notifications were revised based on the activity starting on a later date than originally projected. The data evaluation showed that since June 2013, approximately 60 percent of all notices were revised due to a change in the well activity start date. Figure 1 – Distribution of Revisions to Notifications shows, of all notifications received, about 90 percent of the

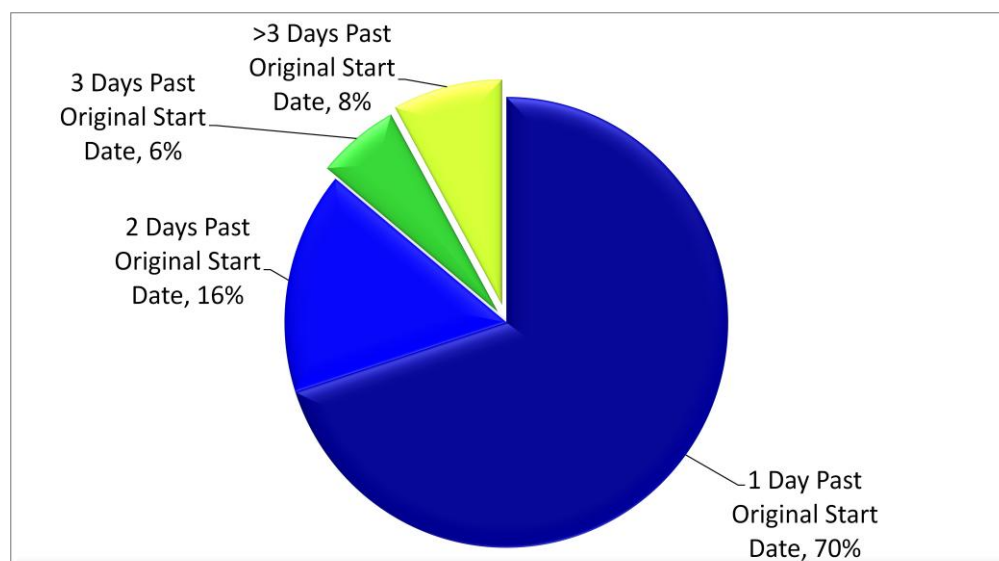
notifications have 2 revisions or less. The minimum notification period for these notifications is based on Rule 1148.2 which currently requires a 24-hour to 10 day notification period.

Figure 1
Distribution of Revisions to Notifications



The notifications are further broken down by examining the percentage of events that go a specific amount of days past the projected event. This breakdown is shown in Figure 2 – Number of Days Expected Start Date is Moved.

Figure 2
Number of Days Expected Start Dates is Moved



Based on 2,400 Notices

The breakdown from Figure 2 demonstrates that the overwhelming majority (~85 percent) of notices which were revised to reflect a new start date, were submitted to start the well event between one and two days of the original start day.

As a result, the SCAQMD staff is proposing to amend Rule 1148.2 to allow operator's the ability to submit 24-hour extensions to the original 72-hour notice requirement. PAR 1148.2 limits the number of 24-hour extensions to five. Each 24-hour extensions will take effect following the end of the previous 24-hour window. Before the end of the fifth 24-hour extension, if the well activity is still not projected to begin, the proposed amended rule requires that the operator cancel the last noticed event. If the operator wishes to proceed with the well event following this cancelation notice, the operator shall comply with a new minimum 72-hour notification. This approach provides additional flexibility to operators in scheduling well events and also ensures a level of certainty to the impacted community that a previously scheduled well event will occur within a given timeframe from the originally noticed projected start date and time.

To address the community's concern that repeated revisions might lead to increased uncertainty and "serial" re-notifications, the SCAQMD is proposing to report back to the Board through the Stationary Source Committee, regarding findings on the numbers of re-notifications and extensions as a result of the 72-hour pre-notification requirement.

Other eChanges

Trade Name Product Volume

Existing Rule 1148.2 (e)(1)(E)(i) contains a requirement that the operator report the volume of well drilling, well rework and well completion fluids used in the well event activity. Effective April 5, 2015, the information reported under paragraph (e)(1) of the rule is no longer required due to a sunset provision placed in the rule language during its original adoption. The SCAQMD

staff has determined that this information is still pertinent to our monitoring and evaluation of the events covered by the rule because it provides a basis for the overall magnitude of the fluids injected into the well. As such, PAR 1148.2 will still maintain the requirement for the ~~supplier and~~ operator to report the total well drilling, well rework and well completion fluids used during the well event activity.

In addition to the well fluid, the SCAQMD staff is also proposing to carry over the pre-existing requirement specified in paragraph (e)(1) for the operator to report the well activity end date. This will now be submitted under the operator reporting requirements specified in paragraph (e)(4) of the proposed amended rule.

Other Administrative Changes

The SCAQMD staff is also proposing the following minor changes/additions to Rule 1148.2:

- ~~• Added a definition for “Well Rework Fluid” which means a carrier fluid mixed with chemical and/or physical additives used in any operation subsequent to drilling that involves a well production stimulation or treatment activity of an existing well.~~
- Subparagraph (d)(1)(E) was amended to add language clarifying that start times for each well event notification is to be submitted along with the start date. This subparagraph was also amended to clarify that the original projected start date and time extends up to a 24 hour window following the originally projected start date and time.
- ~~• Existing subparagraph (d)(2)(B) is proposed to be modified in order to clarify that when revisions or cancellation to an original Rule 1148.2 Notification Form are submitted, the basis for determining the timeframe for submittal would be on or before the original start date.~~
- ~~• New paragraph (d)(5) is proposed to be added in order to clarify that operators submitting revision notifications when the new start date for the well event has changed would also be subject to the original submission timeframes that are specified in existing paragraph (d)(1) (e.g., no less than 24 hours day no more than 10 calendar days prior to the new start date).~~
- A definition of Well Rework Fluid is being added for clarity.
- Subdivision (f) has also been revised to maintain consistency with the rule language changes specified in paragraphs (e)(2) through (4). For instance the total volume and density of the trade name product has been deleted from subdivision (f) since we no longer require it to be submitted.

Water Injection Wells

During the rulemaking process, some environmental and community representatives have commented that Rule 1148.2 should include water injection wells at oil production fields since water injection wells undergoing well treatments such as acidizing, can have similar emission sources as oil and gas production wells undergoing the same type of treatment. When Rule 1148.2 was adopted, water injection wells were not included since SCAQMD staff was informed that there is no flowback from water injection wells, and flowback fluids or fluids that returned to the surface were the primary air quality concern. Before staff proposes to expand the applicability of Rule 1148.2 to include water injection wells that are conducting Rule 1148.2 well stimulation activities, additional time is needed to assess the potential sources that could be affected. SCAQMD staff will continue to evaluate this issue. Staff will be revisiting this issue and other potential future amendments to Rule 1148.2 and report to the Stationary Source Committee after the July Governing Board meeting.

Another concern brought up by environmental and community groups is the need for signage to be posted at well sites to provide another means of making the public aware of ongoing well activities applicable under the rule. There is insufficient time to include a signage provision in the proposed amended rule going to the Board in July. Staff will continue to evaluate this addition and others such as Best Management Practices (BMPs) and report back to the Stationary Source Committee.

AFFECTED SOURCES

SCAQMD Rule 222 - Filing Requirements for Specific Emission Sources Not Requiring a Written Permit Pursuant to Regulation II, currently requires owners and operators of oil and gas wells to register each well group (consisting of no more than four well pumps at a crude oil production and handling facility) subject to Rule 1148.1 – Oil and Gas Production Wells. Rule 1148.1 applies to onshore oil producing wells, well cellars and produced gas handling activities at onshore facilities where oil and gas are produced, gathered, separated, processed and stored. The equipment registration requirement for oil wells in Rule 222 is a streamlined alternative to the standard air quality permitting process.

Based on an evaluation of records associated with the Rule 222 filing requirements for the “Oil Production Well Group” category, there are ~~273–242~~ facilities operating approximately ~~4,614~~,320 onshore oil and gas wells in the District. Due to the geography of the region, the affected facilities are often located in urban areas, and sometimes located within close proximity to residential and other sensitive receptors. Based on well records from DOGGR’s database, there are approximately 6,100 oil, gas, and geothermal wells that are active or idle in the Los Angeles, Riverside, San Bernardino, and Orange County regions. The discrepancy between the number of wells accounted for by Rule 222 versus DOGGR’s database is mainly because DOGGR’s program includes geothermal and injection wells and the Rule 222 database does not.

Based on an evaluation of SCAQMD records collected since the start of reporting in June 2013, approximately 25 well operators have been submitting well activities notices and 18 chemical suppliers have been providing chemicals to the operators.

The proposed requirements in PAR 1148.2 to report the chemicals used during well drilling, completion, and reworks will affect the operators and suppliers of chemicals used during these processes. As with the current rule, the proposed requirements in PAR 1148.2 would require well operators and/or their chemical suppliers to submit to the SCAQMD a comprehensive listing of the chemicals contained in the well drilling fluids, well rework fluids, and well completion fluids. This information, excluding certain “trade secret” information, would then be made publicly available on the SCAQMD’s website. Proposed Amended Rule 1148.2 will only modify the type and manner in which information is reported, submitted and disclosed to the public on the SCAQMD’s Rule 1148.2 Public Information Portal and will not change the basic requirements or compliance process of the current rule.

IMPACT ASSESSMENT FOR PROPOSED AMENDED RULE 1148.2

Implementation of Proposed Amended Rule 1148.2 will not result in emission reductions as it is an administrative rule with no pollution control requirements or control measures. The purpose of PAR 1148.2 is to revise the current reporting requirements for drilling, well rework, and well completion chemicals and trade name products in order to be more consistent with SB 4 and DOGGR’s reporting structure. Specifically for hydraulic fracturing and other well stimulation activities applicable under SB 4, PAR 1148.2 will: 1) disaggregate the reporting of the trade name products from the chemical ingredients within the product; 2) no longer require the reporting of chemical mass concentration within the trade name product, and instead require the chemical’s ~~mass maximum concentration in percent by mass within the total well drilling, well rework, and well completion fluid~~ to be reported; and 3) make all the SB 4 related well stimulation information deemed not to be trade secret under SB 4 provisions, available to the public on the SCAQMD’s website. The proposed amended rule will require the reporting of the items specified in items one (1) and two (2) for non-SB 4 related activities as well. Additional minor changes to rule language have been also made for clarity and consistency.

SOCIOECONOMIC ANALYSIS

PAR 1148.2 would revise the current reporting requirements for drilling, well rework, and well completion chemicals and trade name products in order to streamline the reporting process and be more consistent with SB 4 and DOGGR’s reporting structure. Thus, implementation of PAR 1148.2 will not result in emission reductions or additional costs as it is administrative in nature and does not have adverse socioeconomic impacts. The SCAQMD staff will take steps to structure the reporting process to be nearly identical to the current system to ensure that the affected operators and suppliers will have a relatively smooth transition. Costs associated with this transition are projected to be minimal. Therefore, no costs estimates are provided.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

SCAQMD staff has reviewed the proposed project pursuant to CEQA Guidelines §15002 (k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA and CEQA Guidelines §15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA. Because the SCAQMD is ~~proposing to incorporate state regulatory requirements into~~ amending Rule 1148.2 to align it with the requirements in SB 4, without exercising discretion ~~with regard to the proposed amendments~~, the project is considered to be ministerially exempt from CEQA pursuant to CEQA Guidelines §15268 – Ministerial Projects. Furthermore, the SCAQMD has determined that it can be seen

with certainty that there is no possibility that the proposed project may have any significant effects on the environment, and is therefore, also exempt pursuant to CEQA Guidelines §15061 - Review for Exemption, paragraph (b)(3) – “general rule” exemption. A Notice of Exemption has been prepared pursuant to CEQA Guidelines §15062 - Notice of Exemption. If the proposed project is approved, the Notice of Exemption will be filed with the county clerks of Los Angeles, Orange, Riverside and San Bernardino counties.

FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code §40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

The SCAQMD Governing Board finds and determines that a need exists to adopt Proposed Amended Rule 1148.2 because some of the current trade secret provisions are inconsistent with Senate Bill (SB) 4. The regulations implementing SB 4 were finalized in December 2014 and the final reporting requirements for applicable well stimulation treatment activities take effect on July 1, 2015. However, interim regulations which have similar requirements are already in effect throughout the state.

Authority

The SCAQMD Governing Board has authority to adopt Proposed Amended Rule 1148.2 pursuant to the California Health and Safety Code §§ 39002, 40000, 40701, 40702, 40725 through 40728, 41508, 41511, and 41700.

Clarity

The SCAQMD Governing Board finds and determines that Proposed Amended Rule 1148.2 is written or displayed so that its meaning can be easily understood by the persons directly affected by the rule. Proposed Amended Rule 1148.2 has gone through a public process to determine if there is sufficient clarity in the proposed rule language. This public process included reconvening the Rule 1148.2 Working Group established during the original rule adoption process, made of the oil and gas well production industry, environmental organizations, and the public at large. Significant input from the participating stakeholders ensures that the proposed amended rule is clear and written in a manner that it can easily be understood by the affected industry.

Consistency

The SCAQMD Governing Board finds and determines that PAR 1148.2 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations. Proposed Amended Rule 1148.2 revises the trade secret and reporting requirements for drilling, well rework and well completion chemicals and trade name products in order to be more consistent with SB 4 and DOGGR’s implementing regulations.

Non-Duplication

The SCAQMD Governing Board has determined that Proposed Amended Rule 1148.2 will not impose the same requirements as any existing state or federal regulations. The pre-production activities applicable under Proposed Amended Rule 1148.2 are also regulated by the California Department of Conservation/Division of Oil, Gas, and Geothermal Resources DOGGR and the U.S. EPA. However, Rule 1148.2 was adopted in April, 2013, prior to the adoption of DOGGR's regulations. Under California Code of Regulations, Title 14, Division 2, Chapter 4, subchapter 2, DOGGR requires that operators conducting oil and gas well treatment stimulation submit detailed information about fluids used, and publically disclose this information on a Division website. Applicable well stimulation treatments under DOGGR's SB 4 regulation include various hydraulic fracturing activities such as "fracking", "acid fracking", as well "matrix acidizing."

Reporting requirements for chemical ingredients used in hydraulic fracturing, acid fracturing, and matrix acidizing fluids are also included in PAR 1148.2. While there is a partial overlap, PAR 1148.2 goes beyond DOGGR's SB 4 regulations by requiring the disclosure of chemicals used in well drilling, gravel packing and maintenance acidizing activities not covered by DOGGR's SB 4 regulations. Since initial rule implementation in June 2013, over ninety percent of the well activity events have been non-SB 4 related. This trend is expected to continue, so less than ten percent of the future well activity events will overlap with SB 4-related well activity events. Therefore, the proposed modifications to the reporting requirements of PAR 1148.2 are non-duplicative with DOGGR's SB 4 regulations and provide a higher level of disclosure because it requires disclosure for routine operations that take place more often in the District than hydraulic fracturing-based operations. In addition, PAR 1148.2 requires reporting of total mass of the trade name products, the ~~maximum concentration of each~~mass of each chemical ingredient ~~in percent by mass within the total well drilling, well rework, and well completion fluid to be reported~~, and whether any of the chemical ingredients are classified as air toxics.

Reference

By adopting PAR 1148.2, the SCAQMD Governing Board references the following statutes which SCAQMD hereby implements, interprets or makes specific: California Health and Safety Code §§ 41700 (nuisance), 40460(c) (emissions data), 40913(a)(5) (emission inventory), 41511 (determination of emissions from a source), and Federal Clean Air Act § 112 (Hazardous Air Pollutants), and Sen. Bill No. 4 (2012-2013 Reg. Sess.), codified at Cal. Pub. Res. Code §§ 3213, 3215, 3236.5, 3401, 3150 et seq, Cal. Code Regs. tit. 14, §§ 1761, 1780 et seq.

REFERENCES

REFERENCES

California Legislative Information, Senate Bill No. 4, Oil and Gas: Well Stimulation, 2013-2014, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB4.

Department of Conservation, Division of Oil, Gas, and Geothermal Resources, SB4 Well Stimulation Treatment Regulations, <http://www.conservation.ca.gov/index/Pages/prpsregs.aspx>.

South Coast Air Quality Management District Rule 1148.2 “Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers”, Adopted April 5, 2013, <http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1148-2.pdf?sfvrsn=6>.

Staff Report “Proposed Rule 1148.2 – Notification and Reporting Requirements for Oil and Gas Wells and Chemical Suppliers “ April 2013, <http://www.aqmd.gov/docs/default-source/compliance/rule-1148-2-staff-report.pdf?sfvrsn=4>.

California Legislature, 2012. Senate Bill No. 4, Introduced by Senator Pavley. An act to amend Section 3213 of, and to add Article 3 (commencing with Section 3150) to Chapter 1 of Division 3 of, Public Resources Code, relating to oil and gas. Article 3 – Hydraulic Fracturing.

California Department of Conservation; Division of Oil, Gas, and Geothermal Resources, 2012.

APPENDIX A - COMMENTS AND RESPONSES

Comments Received at Public Workshop Held on April 15, 2015

1. Comment: The proposed amended rule should require operators to conduct sampling and testing of air emissions if filing a trade secret claim. Such information is not considered a trade secret under SB 4.

Response: Proposed Amended Rule 1148.2 is a narrowly focused revision to our existing rule which changes the chemical reporting provisions in order to be more consistent with chemical reporting under the system established by Senate Bill (SB) 4 (2012-2013 Reg. Sess.) and the Division of Oil, Gas, and Geothermal Resources' (DOGGR) regulations implementing SB 4 [Title 14, Division 2, Chapter 4, Subchapter 2 of the California Code of Regulations]. However, the proposed amended rule will continue to require specific information not specified under state law, such as existing notification and reporting requirements for other well activities not covered under SB 4. Adding sampling and testing requirements is not included in the scope of this narrowly focused amendment. In addition, the SCAQMD staff is planning to conclude our evaluation of the Rule 1148.2 submitted reports and sampling and monitoring program and report our findings and recommendations to the Stationary Source Committee, the May/June time frame. This sampling and monitoring program included well events using chemical ingredients both claimed as trade secret and non-trade secret. It is unknown at this time whether sampling and monitoring provisions will be part of our future recommendations.

2. Comment: When will the rule be amended to address air emissions? When the rule was originally adopted in 2013 there was a promise to return in two years and propose additional requirements to control air emissions. In addition, based on the November 2014, Rule 1148.2 Working Group presentation there are obvious impacts from these well activities especially from on-site engines and fluid flowback. Therefore, why aren't you completing this task with this amendment?

Response: Proposed Amended Rule 1148.2 is a narrowly focused revision to our existing rule which changes the chemical reporting provisions in order to be more consistent with state law. Addressing additional requirements is not included in the scope of this narrowly focused amendment. However, the commenter is correct in stating that the SCAQMD staff committed to return to the Governing Board (after a two-year evaluation period) and advise them on our findings and recommendations on the need for controls or additional requirements for applicable well treatment activities. Staff will be reporting at the July Governing Board meeting findings on implementation of Rule 1148.2. After the July Governing Board meeting, staff will provide a report to the Stationary Source Committee. We are nearing the end of the evaluation period and plan to report our findings and recommendations in the May/June time frame. Until that time, it is

premature to speculate on what changes to the rule (if any) are recommended. The commenter is also referred to the response to comment # 1.

- 3. Comment:** The proposed amended rule should include a revision to broaden the information that is available to the public on the District's website by posting the Emission Source Reports on line.

Response: The SCAQMD staff has continually presented the information contained in Rule 1148.2 (e)(1) (i.e., Emission Source Reports) through our presentations to the Rule 148.2 Working Group and Stationary Source Committee. In addition, the information is available through a Public Records Act Request. With this requirement having sunset in April 2015, it is unnecessary to revise the rule to change this requirement. ~~However, the SCAQMD will consider this change for pre-existing reports when making its final recommendations and findings to the Governing Board.~~ However, the SCAQMD staff is committed to revise the Rule 1148.2 Public Portal to accommodate portal enhancements so that the public will be able to search by multiple criteria and have access to the additional reporting forms. We have already initiated this process by working with the Information Management Division to start working on these enhancements.

- 4. Comment:** Our review of the information available on line is that the submitted operator reports routinely have errors in identifying whether chemical ingredients are correctly listed as air toxics. The District should take steps to rectify these errors.

Response: The SCAQMD staff has taken steps to ensure that the information that comes in to the reporting portal is correct. Our staff has reviewed hundreds of submittals of chemical reports from suppliers for accuracy, especially as it relates to whether chemical ingredients are properly classified as air toxics, as well as whether the suppliers are properly distinguishing between chemical ingredients and chemical family names. This evaluation has resulted in hundreds of Chemical Supplier Report re-submittals. The SCAQMD staff will continue to monitor the submittals in order to maintain an accurate data base.

- 5. Comment:** There has been insufficient effort to properly enforce Rule 1148.2, as well as some confusion in the community on whether Rule 1148.2 is for data gathering only and doesn't need enforcement. Can you please explain this contradiction?

Response: A significant number of resources have been devoted in the past two years which resulted in over 100 inspections of oil and gas sites performing well drilling, rework, and completion activities. There also have been

numerous sampling and monitoring site visits where samples were taken and emissions analyzed. Additionally, there have been Notices to Comply issued on over 140 well events to operators as well as for over 60 well events to suppliers. There have also been Notices of Violation issued on over 14 well events to operators. The SCAQMD staff has also worked with the suppliers to correct reporting errors in their reports resulting in hundreds of Chemical Supplier Reports being re-submitted.

The original intent of the rule was to collect and evaluate data related to the air quality impacts from well drilling, well rework, and well completion operations, as well as providing public disclosure of when a well event will occur and the additives and chemical ingredients used during the event. This information is made available through our public reporting portal on the SCAQMD's website and through email. As stated earlier in this response, the SCAQMD has been routinely enforcing the rule provisions. Therefore, the SCAQMD staff does not see a contradiction. There is a data gathering component and an enforcement component.

6. Comment: Acidizing at injection wells should be included in the proposed amended rule language.

Response: During the rulemaking process, some environmental and community representatives have commented that Rule 1148.2 should include water injection wells at oil production fields since the emission impacts from water injection wells undergoing well treatments such as acidizing, can have similar emission sources as oil and gas production wells undergoing the same type of treatment. When Rule 1148.2 was adopted, water injection wells were not included since SCAQMD staff was informed that there is no flowback from water injection wells, and flowback fluids or fluids that returned to the surface were the primary air quality concern when Rule 1148.2 was adopted in 2013. Before staff proposes to expand the applicability of Rule 1148.2 to include water injection wells that are conducting Rule 1148.2 well stimulation activities, additional time is needed to assess the potential sources that could be affected. Staff will continue to evaluate this issue and provide an update and recommendations to the Stationary Source Committee regarding water injection wells that are conducting Rule 1148.2 well stimulation activities. Proposed Amended Rule 1148.2 is a narrowly focused revision to our existing rule which changes the chemical reporting provisions in order to be more consistent with state law. Addressing additional requirements is not included in the scope of this narrowly focused amendment. Expansion of the rule applicability to waste water injection wells is something the SCAQMD staff may consider in the future recommendations to the Governing Board.

7. Comment: In order to further protect families and communities, the proposed amended rule should require a 72-hour original notice requirement in lieu of the existing 24-hour notice requirement.

Response: Expansion of the notification requirements to require noticing with a minimum 72 hours prior to the well activity is something the SCAQMD staff ~~is planning to propose at the July 10, 2015 Governing Board meeting to address this issue. will consider when the SCAQMD staff will report their findings and recommendations to the Governing Board in the May/June timeframe.~~

Written Comments Received

8. Comment: Baker Hughes supports SCAQMD's efforts to revise Rule 1148.2 to ensure consistency with SB 4 and the California Department of Conservation Division of Oil, Gas and Geothermal Resources (DOGGR) regulations implementing SB 4. Specifically, Baker Hughes supports changes to Rule 1148.2 that would (1) disaggregate the reporting of the trade name product from the chemical ingredients within the product, and (2) require disclosure of the maximum concentration in percent by mass within the total well drilling, well rework, or well completion fluid, rather than within the trade name product

Response: Comment noted.

9. Comment: As it is implemented today, Rule 1148.2 carries significant risk with regard to product formulations because it requires operators and chemical suppliers to associate the trade name product, its ingredients and each ingredient's concentration in the trade name product—i.e., the formula for the product—in the disclosure form and, absent trade secret claims, SCAQMD publishes the disclosed information in that associated form. This has the effect of unnecessarily increasing the number of trade secret claims for information that, if reported on a disaggregated basis, could otherwise be disclosed. The Staff Report is correct when it observes that disaggregating of the chemical ingredients from the trade name products helps limit the ability to determine the products' exact formulations. Further protection is provided by requiring disclosure of the maximum concentration of the chemical ingredients within the overall fluid, rather than within the trade name product. Our experience is that both of these changes will reduce, and in some cases eliminate, the potential for the disclosure to betray specific formulaic information to competitors, and therefore that these changes will reduce the number of trade secret claims made in Rule 1148.2 disclosures.

Response: The SCAQMD staff agrees with your comment. The current version of Rule 1148.2 (e)(3), allows the suppliers of chemicals to claim trade secret protection for exact chemical identities, CAS numbers and concentrations of chemicals within each trade name product. The SCAQMD staff believes that some portion of trade secret claims is invoked due to the fact that Rule 1148.2 links trade name products to their chemical ingredients. By disaggregating trade names from chemical ingredients, the PAR 1148.2 reporting scheme provides for the complete disclosure of the identity of chemical ingredients while protecting the exact formulation of each trade name product, with the intent of greatly reducing trade secret claims. DOGGR's staff indicated that to date DOGGR has not received any trade secret claims for the chemical information submitted under the SB 4 interim regulations which also disassociates chemical ingredients from trade names. The proposed amended rule requires the ~~chemical mass concentration of each chemical ingredient within the total fluid~~ to be reported rather in lieu of the chemical mass concentration within the trade name product. This reporting scheme still retains the key information concerning chemical quantities while reducing the likelihood of trade secret claims.

10. Comment: In order to maximize the value of these changes to SCAQMD and regulated entities, Baker Hughes respectfully suggests that the proposed revisions to Rule 1148.2 explicitly articulate the District's intent that chemical ingredients need not be linked to their respective trade name product. Every change to a disclosure rule such as this one triggers work, internally and with our suppliers, to refine the terms and systems by which our suppliers are willing to provide information on products that we wish to continue utilizing in California. Clearly memorializing this change in the text of Rule 1148.2 would give regulated entities—and, importantly, their suppliers—confidence in SCAQMD's intended disclosure format and assurance that they will receive sufficient notice through SCAQMD's administrative procedures to evaluate the impact of any future additional change to these provisions on the products being offered in California. In order to enhance the efforts of the SCAQMD to reduce the number of trade secret claims made under Rule 1148.2, Proposed Amended Rule 1148.2 (e)(2) should be revised according to the following ~~strikeout~~ and underline changes:

(e) Reporting Requirements

(2) Except as provided in subparagraph (e)(2)(G) below...

(C) identity and chemical abstract service (CAS) number of each chemical ingredient used or contained in ~~each~~ trade name products identified in subparagraph (e)(2)(A), without being required to associate any chemical ingredient with any specific trade name product;

(E) identification of whether ~~each~~ the chemical ingredient **identified in subparagraph (e)(2)(C)** used or contained in the trade name product is an air toxic

Response: While the Draft Staff Report clearly indicates that the justification for disassociating the chemical ingredients from the trade name products in PAR 1148.2 is to reduce the number of trade secret claims and thus increase the level of public disclosure, the SCAQMD agrees with the commenter that placing the proposed text into the proposed rule language provides additional clarity and intent. Therefore, PAR 1148.2 incorporates the proposed text.

11. Comment: In order to enhance the efforts of the SCAQMD to reduce the number of trade secret claims made under Rule 1148.2, Proposed Amended Rule 1148.2 (e)(2) should be revised according to the following ~~strikeout~~ and underline changes:

(f) SCAQMD Website Posting of Chemicals

The Executive Officer shall make the following information as received under subdivision (e) available to the public for each event by operator name, well name, API well number, location, and date of activity on a website:

(1) For all **events** where no trade secret claim has been made:

(B) ~~Name~~ **Identity** and chemical abstract service (CAS) number of each chemical ingredient used or contained in each trade name **products identified in subparagraph (f)(1)(A)**, unless it has been claimed as a trade secret, **without associating any chemical ingredient with any specific trade name product;**

(2) For all events where a trade secret claim has been made:

(B) **Identity and chemical abstract service (CAS) number of each chemical ingredient used or contained in trade name products identified in subparagraph (f)(2)(A), unless it has been claimed as a trade secret, without associating any chemical ingredient with any specific trade name product.** If the chemical ingredient and/or CAS number have been claimed to be trade secret, then the Chemical Family name or similar descriptor will be posted

Response: The SCAQMD staff agrees with the comment. The majority of the proposed text has been added to PAR 1148.2. Some of the text has not been added since it is unnecessary. The commenter is also referred to the response to comment #10.

12. Comment: The proposed amended rule should require operators to conduct sampling and testing of air emissions if filing a trade secret claim. Such information is not considered a trade secret under SB 4. To accomplish this, the

language specified below should be added to subdivisions 1148.2 (e) and (f).

(e) Reporting Requirements

(7) In the event that the supplier to an operator or the operator claims trade secret or proprietary status for any chemical or other component and the Executive Director has approved such claims, the operator shall be responsible for:

(A) Contracting with an independent third-party for collection through reporting of air emissions from flowback fluids through District approved contractors;

(B) Collection, storage, conveyance, analyses, and reporting of representative flow-based samples of all air emissions from the well and associated stimulating equipment and all tanks or venting systems connected thereto. Such collections shall include samples from initiation of flowback, periodically throughout the flowback process, and immediately before the cessation of the flowback;

(C) No flowback shall be discharged, transferred, and disposed of which has not been appropriately sampled at intervals of 2000 gallons;

(D) Analyses of all such samples shall be appropriately quality controlled and assured and shall include appropriate anion/cation, NORMs, any hydrocarbons, VOC, TAC, or TOC compounds at detectible levels (ppb);

(E) Reporting of collections through reporting activities and results shall be directly to the Executive Director with copies to the supplier(s) and operator.

(F) Approved Quality Control and Assurance Program for sampling, conveyance, analyses, and reporting for flowback

(f) SCAQMD Website Posting of Chemicals

(3) For all events where additional flowback analyses were required (where a trade secret claim had been made):

(A) Conditions and activities, dates, times, and operator and API well number;

(B) Complete VOC, TAC, and TOC and constituents compositions; and

(C) Estimated total fluids involved in flowback interval related to the sampling time.

Response:

As mentioned previously, sampling and testing requirements are not included in the scope of this narrowly focused amendment. As part of the Board Resolution to adoption of Rule 1148.2, the SCAQMD staff committed to conduct sampling and monitoring during the two-year evaluation period for the rule. This sampling and monitoring program included well events using chemical ingredients claimed as trade secret. SCAQMD staff conducted over 100 site visits for Rule 1148.2-related activities. Sampling and monitoring of liquid and air emissions occurred at approximately 30 site visits at which four to six summa canisters were collected, and hand-held H₂S, particular matter (PM_{2.5}, PM₁₀), and Toxic Vapor Analyzers (TVA) monitors were used. In addition, drilling mud and return fluid (when available) samples were also collected and analyzed. Additional requirements beyond what is needed to accomplish the goal of making Rule 1148.2 more consistent with SB 4 and the DOGGR reporting structure is not being considered in this amendments, but may be included in a future amendment for Rule 1148.2. of the findings and recommendations to the Governing Board in the May/June time frame. The commenter is also referred to the response to comment #1.

13. Comment: What data has the SCAQMD gathered to justify any the proposed changes? Providing the public notice of benign activities, which the District has confirmed in their emissions monitoring, only impacts those wishing to organize anti-oil protests and continue to misinform the public. Why should the District be concerned about this since it has nothing to do with their jurisdictional responsibilities?

Response:

The proposed changes to the notification provisions result from community representatives who have commented that families need 72-hours notice to modify their day to leave their residence or make other arrangements in order to avoid the impacts from Rule 1148.2 well activities. As a result, the SCAQMD staff is proposing to amend Rule 1148.2 to increase the minimum notification timeframe from 24 to 72 hours. No final conclusions have been reached in regards to the air impacts from Rule 1148.2 well activities. The SCAQMD staff plans to present this information to the Stationary Source Committee. However, interim findings presented at the Stationary Source Committee in November 2014, indicate that there are odors and engine emissions from these operations that may impact nearby residents. As a result, the

proposed amended rule contains provisions to increase the minimum well event notification time from 24 hours to 72 hours prior to the originally projected date and time of the well event.

14. Comment: Due to the complexities of scheduling a Rule 1148.2 reportable activity (such as coordinating equipment and personnel), it is very important for the operator to have flexibility in determining the start of an activity. Because of these complexities, the start time is inevitably dynamic. At the same time, once these factors are lined up, the Operator has every incentive to proceed expeditiously, both to minimize high activity expenses and to act quickly for well protection and enhancement.

Response: The SCAQMD staff is aware of the inherent difficulties in scheduling Rule 1148.2 well activities. During the development of PAR 1148.2, operators had commented that a 72-hour notification period before the start date was a concern if they would be required to wait a 72 hours if they needed to re-notify. Operators commented that there are frequent last minute delays common in the well drilling and treatment operations due to scheduling equipment, delays in receiving equipment, operational delays at the site, to name a few. In addition, staff's evaluation of the existing Rule 1148.2 data base shows that at least sixty percent of all original well event notifications are revised at least once, and data shows that the majority of original well event notifications which undergo a date revision, are revised between one and three times. Language has been added that provides flexibility by allowing the operator to electronically file extensions in 24-hour increments, up to a maximum of five extensions. This will cover almost all cases where the projected date and time cannot be met.

15. Comment: Requiring a 72-hour re-notification delay after two revisions would impose substantial non-productive time at significant cost. For drilling operations, the daily rig charges are a minimum of \$60,000 per day, plus additional standby and labor charges. For gravel pack jobs, the condition of the well bore can degrade rapidly during delays. Significant delay will jeopardize the success of the gravel pack job and require additional work and cost. Further, at the extreme, a poor job can immediately render the well unusable or significantly decrease its useful life. Both types of damage would ultimately require re-drilling the well at a very high cost (in the millions of dollars). For acidizing, the mixture has a relatively short life before negative properties render the mixture unusable.

Response: The SCAQMD staff has modified the maximum two 24-hour extension provisions to now specify that an operator may seek individual 24-hour extensions up to a maximum of five times after the originally projected well event date and time which provides a 24-hour window. If the well event will not occur within this five 24-hour extension period, the operator

can cancel the last submitted extension and re-submit a new well event notification meeting a minimum 72-hour notification period. The operator can cancel the notification before five-24 hour extensions if it is expected that the well activity will be substantially delayed. If the operator cancels the event and submits a new notification, that new notification would be allowed to be extended in 24-hour increments, up to five times. This approach provides additional flexibility to operators in scheduling well events while minimizing waiting 72 hours to re-notify, and also ensures a level of certainty to the impacted community that a previously scheduled well event will occur within a given timeframe from the originally noticed projected start date and time.

16. Comment: If the District does ultimately increase the re-notification period, we strongly recommend that well drilling be exempted

Response: Since the proposed amended rule has been modified to increase the extension timeframes, the SCAQMD staff does not see a need to exempt well drilling operations in the proposed rule.

17. Comment: Increasing the minimum initial notification of the activities beyond 24 hours would only diminish the operators' ability to accurately predict when the activities will begin, and would only increase the need for start date revisions. In addition, from the perspectives of both the public and the operator, expeditious performance of a reportable activity will minimize its overall duration

Response: The SCAQMD staff agrees that increasing the minimum notification timeframes will decrease the accuracy of the originally projected start date(s) and time(s). However, since the proposed amended rule has been modified to increase the extension timeframes, the SCAQMD staff does see a need to remove the 72-hour minimum notification time period. A 72-hour minimum notification period provides the public with more advance notice. In regards to the expeditious performance comment, the SCAQMD staff does not see a nexus between a minimum notification time and the performance or duration of the Rule 1148.2 well activity.